

THAT WHICH IS CLAIMED:

- 5 1. An isolated polypeptide selected from the group consisting of:
- (a) a polypeptide comprising an amino acid sequence set forth in SEQ ID NO: 2;
  - (b) a polypeptide encoded by a nucleotide sequence comprising the sequence set forth in SEQ ID NO: 1;
  - (c) a polypeptide sequence encoded by the cDNA insert deposited as
  - 10 Patent Deposit No. \_\_\_\_\_;
  - (d) a polypeptide having at least 75% identity to the sequence of SEQ ID NO:2, wherein said polypeptide has proteinase inhibitor-like activity; and,
  - (e) a polypeptide comprising at least 20 contiguous amino acids of
  - 15 SEQ ID NO:2.
2. An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:
- (a) a nucleotide sequence comprising the sequence set forth in SEQ ID
  - 20 NO:1;
  - (b) a nucleotide sequence encoding a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2;
  - (c) a nucleotide sequence comprising the cDNA sequence deposited as Patent Deposit No. \_\_\_\_\_;
  - (d) a nucleotide sequence having at least 75% identity to the sequence
  - 25 of SEQ ID NO:1, wherein said sequence encodes a polypeptide having proteinase inhibitor-like activity;
  - (e) a nucleotide sequence having at least 20 contiguous nucleotide sequences of SEQ ID NO:1;
  - (f) a nucleotide sequence comprising the complement of a sequence
  - 30 corresponding to a), b), c), d) or e); and,
  - (g) a nucleotide sequence that hybridizes under stringent conditions to

the complement of a), b) or c), wherein said sequence encodes a polypeptide having proteinase inhibitor-like activity and said stringent conditions comprise hybridization in 50% formamide, 1 M NaCl, 1% SDS at 37°C and a wash in 0.1X SSC at 60°C to 65°C.

5            3.        A DNA construct comprising a nucleotide sequence of claim 2, wherein said nucleotide sequence is operably linked to a promoter that drives expression in a host cell.

4.        A vector comprising the DNA construction of claim 3.

10           5.        A plant cell having the vector of claim 4.

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15           6.        A plant having stably incorporated into its genome at least one DNA construct comprising a nucleotide sequence operably linked to a heterologous promoter that drives expression in said plant, wherein said nucleotide sequence is selected from the group consisting of

(a)       a nucleotide sequence comprising the sequence set forth in SEQ ID NO:1;

(b)       a nucleotide sequence encoding a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2;

20           (c)       a nucleotide sequence comprising the cDNA sequence deposited as Patent Deposit No. \_\_\_\_\_;

(d)       a nucleotide sequence having at least 75% identity to the sequence of SEQ ID NO:1;

(e)       a nucleotide sequence having at least 20 contiguous nucleotide sequences of SEQ ID NO:1, wherein said sequence encodes a polypeptide having proteinase inhibitor-like activity;

(f)       a nucleotide sequence comprising the complement of a sequence corresponding to a), b), c), d) or e); and,

30           (g)       a nucleotide sequence that hybridizes under stringent conditions to the complement of a), b) or c), wherein said sequence encodes a polypeptide having proteinase inhibitor-like activity and said stringent conditions comprise hybridization in

50% formamide, 1 M NaCl, 1% SDS at 37°C and a wash in 0.1X SSC at 60°C to 65°C.

7. The DNA construct of claim 3 wherein said promoter is selected from the group consisting of:

- 5 (a) a nucleotide sequence comprising the sequence set forth in SEQ ID NO:3;
- (b) a nucleotide sequence comprising the DNA insert of Patent Deposit No. \_\_\_\_;
- 10 (c) a nucleotide sequence having at least 75% identity to the sequence of SEQ ID NO:3, wherein said sequence is capable of regulating transcription; and,
- (d) a nucleotide sequence comprising at least 20 contiguous nucleotides of SEQ ID NO:3, wherein said sequence is capable of regulating transcription.

15 8. The plant of claim 6, wherein said promoter is an inducible promoter.

9. The plant of claim 8, wherein said promoter is a pathogen-inducible promoter.

20 10. The plant of claim 6, wherein said plant is a monocot.

11. The plant of claim 10, wherein said monocot is maize, wheat, rice, barley, sorghum, or rye.

25 12. The plant of claim 6, wherein said plant is a dicot.

13. A transformed seed of the plant of claim 6.

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30 14. A method for modulating disease resistance in a plant, said method comprising stably introducing into the genome of the plant at least one DNA construct comprising a nucleotide sequence operably linked to a heterologous promoter active in

said plant, wherein said nucleotide sequence is selected from the group consisting of:

(a) a nucleotide sequence comprising the sequence set forth in SEQ ID NO:1;

(b) a nucleotide sequence encoding a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2;

(c) a nucleotide sequence comprising the cDNA insert of Patent Deposit No. \_\_\_\_\_;

(d) a nucleotide sequence having at least 75% identity to the sequence of SEQ ID NO:1 wherein said nucleotide sequence encodes a polypeptide having proteinase inhibitor-like activity;

(e) a nucleotide sequence comprising at least 20 contiguous nucleotides of SEQ ID NO:1; and,

(f) a nucleotide sequence that hybridizes under stringent conditions to the complement of a), b) or c), wherein said sequence encodes a polypeptide having proteinase inhibitor-like activity and said stringent conditions comprise hybridization in 50% formamide, 1 M NaCl, 1% SDS at 37°C and a wash in 0.1X SSC at 60°C to 65°C.

15. A method of modulating the level of a polypeptide in a plant, comprising:

(a) introducing into the genome of a plant cell a DNA construct comprising a polynucleotide of claim 2 operably linked to a promoter;

(b) culturing the plant cell under plant growing conditions to produce a regenerated plant; and,

(c) inducing expression of said polynucleotide for a time sufficient to modulate the level of said polypeptide in said plant.

16. The method of claim 15, wherein the plant is maize, soybean, sunflower, sorghum, canola, wheat, alfalfa, cotton, rice, barley, or millet.

17. The method of claim 15, wherein the level of said polypeptide is increased.

18. An isolated nucleotide sequence selected from the group consisting of:  
(a) a nucleotide sequence comprising the sequence set forth in SEQ ID NO:3;  
(b) a nucleotide sequence comprising the DNA insert of the Patent Deposit No. \_\_\_\_;  
(c) a nucleotide sequence having at least 75% identity to SEQ ID NO:3, wherein said nucleotide sequence is capable of regulating transcription; and,  
(d) a nucleotide sequence comprising at least 20 contiguous nucleotide sequences of SEQ ID NO:3, wherein said nucleotide sequence is capable of regulating transcription.

19. A DNA construct comprising a promoter having the nucleotide sequence of claim 18 operably linked to a nucleotide sequence of interest.

20. An expression vector comprising the DNA construct of claim 19.

21. A plant having stably incorporated into its genome at least one DNA construct comprising a nucleotide sequence of interest operably linked to a promoter, wherein said nucleotide sequence of interest is heterologous to said promoter and wherein said promoter is selected from the group consisting of:  
(a) a promoter sequence comprising the sequence set forth in SEQ ID NO:3;  
(b) a promoter sequence comprising the DNA insert of the Patent Deposit No. \_\_\_\_;  
(c) a promoter sequence having at least 75% identity to SEQ ID NO:3 wherein said promoter sequence regulates transcription of said heterologous nucleotide sequence of interest; and,  
(d) a promoter comprising at least 20 contiguous nucleotide sequences of SEQ ID NO:3, wherein said promoter sequence regulates transcription of said heterologous nucleotide sequence of interest.

22. A plant cell having the vector of claim 20.

23. A method of regulating the expression of a nucleotide sequence of interest,  
said method comprising stably incorporating in the genome of a plant cell a nucleotide  
sequence of interest operably linked to a promoter comprising a nucleotide sequence of  
5 claim 18, wherein said nucleotide sequence of interest is heterologous to said promoter.

24. The method of claim 23, further comprising contacting said plant cell with  
a stimuli that induces expression of said nucleotide sequence of interest.

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